

Dr. Vogel attended the Technical University of Berlin, Germany before receiving his M.S. and Ph.D. degrees in Electrical Engineering from The University of Texas at Austin, Austin, Texas. He works at the Electrical Engineering Research Laboratory (EERL) of The University of Texas at Austin.

Since 1974, Dr. Vogel has had governmental and industrial support for performing satellite-earth wave propagation research, moving from rain attenuation and depolarization effects at frequencies above 10 GHz to fading effects due to shadowing and multipath for land-mobile and personal satellite communications at frequencies from UHF to K-Band. He is also involved in vector-channel propagation measurements made with the University of Texas "smart" antenna testbed.

Dr. Vogel is a Fellow of the IEEE and Chairman for Commission F of the US National Committee of URSI (International Union of Radio Science, Wave Propagation and Remote Sensing) for the years 1997 through 1999. He currently chairs the IEEE Standards Committee for Wave Propagation.

Mr. Hagn received his BSEE and MSEE degrees from Stanford University and has been with SRI International (formerly Stanford Research Institute) for the past 40 years. There he has been involved in many studies of tactical and strategic communications and made key contributions to solving a large variety of practical and theoretical antenna, propagation and communications problems for governmental and industrial clients.

He developed the Open-Wire-Line (OWL) kit to measure the conductivity and relative permittivity of vegetation and ground layers. The OWL kit was used in various U.S. and Thailand jungles to obtain data for the lossy dielectric slab model of a forest. His special interest in antenna measurements led him to help in the development of several full-scale HF and VHF airborne antenna pattern measurement systems that were used to measure antennas in cleared areas and in forest environments.

Mr. Hagn is a Life Fellow of the IEEE and an Associate Editor of the IEEE Antennas and Propagation Magazine (for Standards). He is Secretary of the IEEE Wave Propagation Standards Committee (WPSC) and Chairman of the IEEE Antenna Standards Committee (ASC). He has been active in the International Union of Radio Science (URSI) as a member of URSI Commissions C, E and F. He served as the first chair of U.S. URSI Commission E and second international chair of that commission. He also served on the U.S. National Committee (USNC) of URSI as a member and also as Vice Chairman. He is a member of several other professional organizations, including the American Geophysical Union (AGU), Applied Computational Electromagnetics Society (ACES), the Armed Forces Communications-Electronics Association (AFCEA), and the American Association for the Advancement of Science (AAAS). He serves on the U.S Study Groups of the International Telecommunication Union (ITU) Radiocommunication Sector (ITU-R) Study Groups 1 (Spectrum Management) and 3 (Propagation).